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Note on Drawings of Jupiter made at Parsonstown, and by M. Terby, at Louvain, in 1873. By the Earl of Rosse.

In the Notes which accompany the chromolithographs of drawings of the planet *Jupiter* made at Parsonstown, which appeared in the *Monthly Notices* for last March, it is suggested that a disagreement as regards position between a marking shown on that of March 7, and a similar one very prominent on M. Terby's of March 8, $6^h\ 35^m$ to $6^h\ 50^m$, which we took to be identical with it, might possibly be traced to an error of 1^h in M. Terby's recorded time.

M. Terby having since written to me to say that he feels certain that no such error was made, it seems only due to him that the substance of his remarks should appear in the same publication.

We must now conclude that the feature drawn by M. Terby was exceedingly transient. It does not with certainty appear on a sketch by Mr. N. E. Green, dated March 7, 11^h, which he has been good enough to let me see; and if it can be identified with that which has been seen by us, it must be (as M. Terby suggests) with the marking towards the left of our No. 15, or near the centre of our No. 18.

The repetition of the same feature, with in some cases only exceedingly slight variation, in different parts of the same belt, together with the rapidity with which changes in their shape take place, often renders their certain identification impossible.

Extract from M. Terby's Letter, dated Louvain, May 1, 1874.

"Je puis vous assurer qu'il n'y a pas d'erreur dans le temps de mon observation du 8 Mars, de $6^h\ 35^m$ à $6^h\ 50^m$. J'en ai la certitude non seulement par l'inspection de mes notes, mais par le souvenir que, par une circonstance fortuite, j'ai gardé de cette observation. Je me rappelle parfaitement la bande recourbée qui est renfermée dans ce dessin. De plus, cette observation a été faite dans les mêmes conditions que la suivante de $8^h\ 10^m$ à $8^h\ 35^m$, que vous avez trouvée exacte, et représentant le crochet dont vous vous occupez. Je vois un autre moyen d'expliquer l'écart que vous signalez et je crois en trouver la confirmation dans vos intéressantes observations elles-mêmes.

"D'après vos calculs, la longitude jovicentrique de la tache en question doit être 260°. Or envisageant votre dessin 3, dans lequel la courbure dont il s'agit occupe la même position que celle de mon dessin 3, je vois que vous avez trouvé pour longitude de votre méridien central 256°·1, et pour le mien 223°·4. Il me semble impossible, d'après cela, d'admettre que les deux dessins représentent la même tache. La bande courbée de mon dessin 3 doit *précéder* celle que vous considerez spécialement, et est devenue invisible dans mon second dessin du 8 Mars, peut-être à cause de sa proximité du bord. Il est bien fâcheux que

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jusqu'ici je ne connaisse pas d'observations coincident avec mon dessin de $6^h\ 35^m$; je suis persuadé que l'on y verrait la bande que j'ai représentée.

"A défaut de coincidence parfaite, je m'appuierai sur vos dessins 15 et 18, qui renferment des traces évidentes de bandes courbées, précédant celle dont vous vous occupez, car la longitude est ici 200°·1 et 220°·6.

"Ces prolongements établissent une communication entre le bord S de la bande équatoriale et des régions plus septentrionales, semblant avoir été très fréquentes en 1873; on en trouve un autre exemple dans les crochets de mes dessins 2, 9 et 11, que j'avais jugés visibles à peu près sur le même hémisphère, et qui, d'après vous, seraient complètement distincts."

June 8, 1874.

Observations of Jupiter, 1874. By E. B. Knobel, Esq.

Observations of *Jupiter* were commenced on February 8th, 1874, and up to the present time but few opportunities of fair observation have been lost. On the whole the opposition this year has been a very favourable one for study of the planet; a large number of fine nights, coupled with good definition, enables one, I think, to submit one's results with some amount of confidence.

The series of 35 drawings, which I beg to present to the Society, has been made with an $8\frac{1}{2}$-inch silvered glass reflector by Browning, of excellent quality. The powers used were Browning-achromatic eye-pieces of 144, 208, and 250. Every care was exercised to represent what was actually seen, and to give the relative intensity of the various features; and with a view to obtain as impartial evidence as possible, no comparison of the drawings was made till they were all (with two exceptions) copied out in their present form.

The changes in the planet's aspect since the last opposition have been so numerous, that I have included in the series nearly all the drawings I was able to make. It might be thought that in such a series of drawings, many of which represent the same zeuographical meridians, some would be merely replicas of others, but I have found that this is not the case. The state of the atmosphere has made definition variable, and, coupled with absolute changes in the features of the belts, renders it almost impossible for two drawings of *Jupiter* having the same longitude, but executed at different periods, to correspond exactly. Some of the principal features seem to have been permanent for the whole period of observation; others it is difficult to reconcile with what was observed on the same meridian at a subsequent date.

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